

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A neutron detector comprising
scintillating material $\text{Cs}_{(2-z)}\text{Rb}_z\text{LiLn}_{(1-x)}\text{X}_6 : x\text{Ce}^{3+}$, where X is either Br or I, Ln is Y
or Gd or Lu or Sc or La, where z is greater or equal to 0 and less or equal to 2, and x is above
0.0005; and

a detector which detects luminescence emitted from the scintillating material as a
measure of the presence of neutrons in a radiation sample applied to the neutron detector.

Claim 2 (Previously Presented): The neutron detector according to claim 1, wherein x
is above 0.005.

Claim 3 (Previously Presented): The neutron detector according to claim 1, wherein x
is less than 0.3.

Claim 4 (Previously Presented): The neutron detector according to claim 1, wherein x
is less than 0.15.

Claim 5 (Previously Presented): The neutron detector according to claim 1, wherein it
is in the form of a monocrystal.

Claim 6 (Previously Presented): The neutron detector according to claim 5, wherein
the volume of the monocrystal is at least 10 mm^3 .

Claim 7 (Currently Amended): The neutron detector according to claim 1, wherein
[[it]] the scintillating material is in the form of a powder.

Claim 8 (Currently Amended): The neutron detector according to claim 1, wherein
[[it]] the scintillating material is packed, sintered, or mixed with a binder.

Claim 9 (Currently Amended): The neutron detector according to claim 1, wherein
[[its]] the scintillating material formula is $\text{Cs}_2\text{LiYX}_6:\text{xCe}^{3+}$.

Claim 10 (Currently Amended): The neutron detector according to claim 1, wherein
[[its]] the scintillating material formula is $\text{Rb}_2\text{LiYX}_6:\text{xCe}^{3+}$.

Claim 11 (Currently Amended): A method of neutron detection comprising
applying radiation to a detector comprising ~~detecting neutrons using~~ a material of
formula $\text{Cs}_{(2-z)}\text{Rb}_z\text{LiLn}_{(1-x)}\text{X}_6:\text{xCe}^{3+}$, where X is either Br or I, Ln is Y or Gd or Lu or Sc or
La, where z is greater or equal to 0 and less or equal to 2, and x is above 0.0005; and
measuring luminescence from the detector as a measure of the presence of neutrons in
the radiation.

Claim 12 (Previously Presented): The method according to claim 11, wherein x is
above 0.005.

Claim 13 (Previously Presented): The method according to claim 11, wherein x is
less than 0.3.

Claim 14 (Previously Presented): The method according to claim 13, wherein x is less than 0.15.

Claim 15 (Previously Presented): The method according to claim 11, wherein the material is in the form of a monocrystal.

Claim 16 (Previously Presented): The method according to claim 15, wherein the volume of the monocrystal is at least 10 mm³.

Claim 17 (Previously Presented): The method according to claim 11, wherein the material is in the form of a powder.

Claim 18 (Previously Presented): The method according to claim 17, wherein the material is packed, sintered, or mixed with a binder.

Claim 19 (Previously Presented): The method according to claim 11, wherein the material formula is Cs₂LiYX₆:xCe³⁺.

Claim 20 (Previously Presented): The method according to claim 11, wherein the material formula is Rb₂LiYX₆:xCe³⁺.

Claim 21 (Previously Presented): A material of the formula Rb₂LiLnX₆:xCe³⁺ where X is either Br or I, Ln is Y or Gd or Lu or Sc or La, and x is above 0.0005.

Claim 22 (Previously Presented): A material of the formula $\text{Cs}_{(2-z)}\text{Rb}_z\text{LiLn}_{(1-x)}\text{I}_6\text{:xCe}^{3+}$, where Ln is Y or Gd or Lu or Sc or La, where z is greater or equal to 0 and less or equal to 2, and x is above 0.0005.

Claim 23 (Previously Presented): The material according to claim 21, where x is above 0.005.

Claim 24 (Previously Presented): The material according to claim 21, wherein x is less than 0.3.

Claim 25 (Previously Presented): The material according to claim 24, wherein x is less than 0.15.

Claim 26 (Currently Amended): The material according to claim 21, ~~wherein it~~ which is in the form of a monocrystal.

Claim 27 (Previously Presented): The material according to claim 26, wherein the volume of the monocrystal is at least 10 mm^3 .

Claim 28 (Currently Amended): The material according to claim 21, ~~wherein it~~ which is in the form of a powder.

Claim 29 (Currently Amended): The material according to claim 28, ~~wherein it~~ which is packed, sintered, or mixed with a binder.

Claim 30 (Previously Presented): The material according to claim 21, where Ln is Y.